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A new species of *Caddella* (Opiliones: Caddidae) from South Africa

by

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ABSTRACT

Caddella croeseri sp. n. is described from the eastern Cape Province and Natal. A brief review of the distribution of known species of the genus is given, and a key for their identification.

The genus *Caddella* was established by Hirst (1925) for a single species, *C. capensis*, from the Cape Province of South Africa. It was considered to be a member of the family Acropsopilionidae which then contained only a monotypic genus from Chile. In 1931 Lawrence created another monotypic genus, *Oonopsopilio*, and in 1935 synonymised it with *Caddella* and described one more species with a colour variety. Kauri (1961) redescribed *C. capensis* and *C. africana* but left the genus in Acropsopilionidae. In 1975 Shear, when revising the American forms of Caddidae, included the African species and assigned them to this family, recognising Acropsopilioninae as a subfamily.

The three southern African species described to date are:

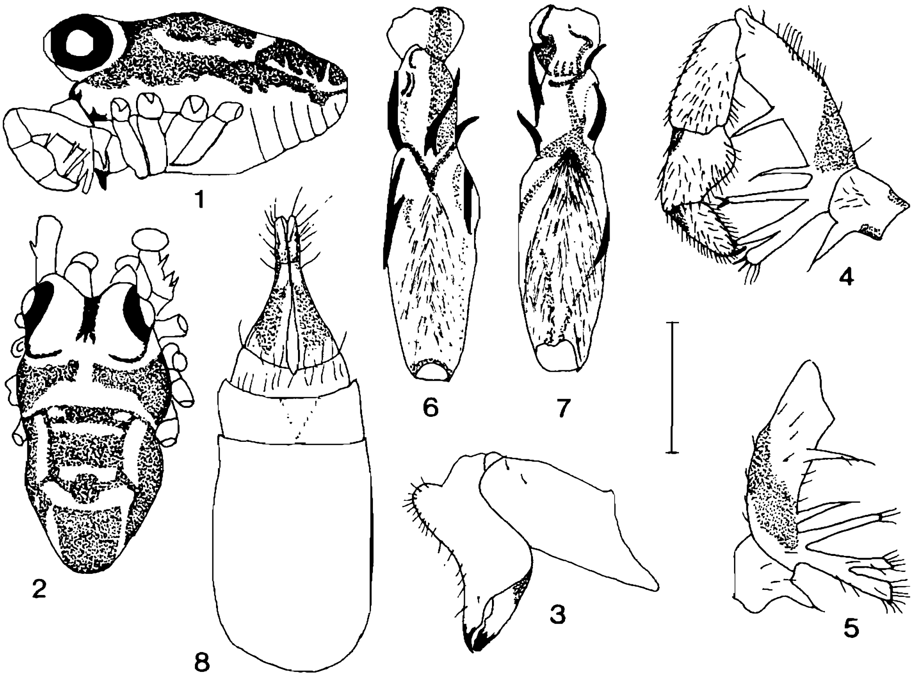
1. *Caddella capensis* Hirst, 1925. Eastern Cape Province: Port Alfred, Grahamstown (Hirst 1925). Stormsrivierpiek in Tzitzikamma Forest (Kauri 1961). Genitalia illustrated by Hirst (1925 fig. 5c), Shear (1975 figs 25–27)—penis, and Kauri (figs 78D–E)—ovipositor with seminal receptacles.
2. *Caddella africana* (Lawrence, 1931). Western Cape Province: Ladismith, Cape Town (Signal Hill), Table Mt., Simonstown, Plumstead, Ashton, Worcester Mts., St. Helena Bay (Lawrence 1931), Steenbras Dam near Gordons Bay (Kauri 1961); Eastern C.P.: Addo Bush (Lawrence 1931)—the last record should be checked, the specimens may represent either *capensis* or *croeseri*. Genitalia illustrated by Kauri (1961 figs 78A–C)—penis, and Shear (1975 fig. 30)—ovipositor.
3. *Caddella spatulipilis* Lawrence, 1935. Western Cape Province: Jonkershoek near Stellenbosch, Caledon (var. *caledonica* Lawr.) (Lawrence 1935). Genital organs undescribed.

Amongst the unidentified material of the Natal Museum I found several specimens of *Caddella*, which belong to an undescribed species.

Caddella croeseri sp. n.

Figs 1–8

Diagnosis. A *Caddella* species displaying all generic characters, differing from other species by rounded process (bump) on second joint of male chelicera, four



Figs 1–8. *Caddella croeseri* sp. n. 1–7. Male paratype. 1. Body, lateral view. 2. Body, dorsal view. 3. Right chelicera, mesal view. 4. Right pedipalp, mesal view. 5. Trochanter and femur of right pedipalp, lateral view. 6. Penis, ventral view. 7. Penis, dorsal view. 8. Allotype ovipositor. Scale: Figs 1–2, 1,0 mm; Figs 3–8 0,5 mm.

long spines on palpal femur (the basal forked one with blunt apex of its main branch or bifurcated once more), and structure of genital organs.

Male (Figs 1–2). Body 2,41–2,56 (2,46$_5$; 2,56[1]) long, convex. Abdomen distinctly separated from cephalothorax, conically pointed. Eye tubercle 1,09–1,17 (1,12$_5$; 1,13) wide, occupying whole width of the cephalothorax and more than one quarter of total length of body, strongly projecting forwards and deeply divided by a very broad median furrow. All thoracic tergites fused. First three abdominal tergites fused, marked only by colour patterns; last five tergites free, distinct. Dorsum leathery, microscopically granulated, sternites with single, incomplete rows of small setae. Similar, but slightly longer setae also on genital operculum, coxae and mouthparts.

Chelicera (Fig. 3): first joint without projections, second with a rounded bump mediolaterally. Palpal trochanter with one sharp spine ventrally—nearly as long as joint diameter. Femur (Figs 4–5) 0,75–0,84 (0,78$_5$; 0,84) long, with four long, strong spines ventrally—the basal one forked in mid-length and its basal (main) part with blunt, broad apex or with an additional short subapical branch (in the same specimen!); other spines sharply pointed, bearing several setae (shortest spine with only one apical seta). Medial femur surface with small conical protuberance apically, dorsal surface with a row of setae—longer and denser in the distal half (probably a glandular field). Patella, tibia and tarsus nearly equal in length; patella and tibia thicker than femur, tarsus much thinner. Patella bearing only short, weak setae medially, dorsally and laterally; tibia and tarsus with longer, stronger tactile setae also ventrally. Legs long and slender, with cylindrical joints (femur, patella, tibia) armed with irregular rows of short, weak setae or hairs. Length of femora: I—2,61–3,00 ($2,85_3$; 3,00), II—3,85–4,57 ($4,23_4$; 4,57), III—3,07–3,53 ($3,33_3$; 3,53), IV—4,38–4,96 ($4,75_3$; 4,96).

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[1] Figures in parentheses: mean value of five (subscript) measurements; measurement of the holotype. All in millimetres.

Dorsum with silvery or golden gleam, mottled and shaded with dark brown. Brown markings form a broken median band. Eye tubercle silvery, golden or brown with golden gleam, with broad black rings around eyes. Carapace with broad silvery lateral margins. Venter whitish-yellow with weak metallic gleam on abdominal sternites. Chelicerae yellow, pedipalps silvery-yellow, brown shaded and spotted, legs dark brown with silvery-white rings on femur, patella and tibia.

Penis (Figs 6–7) 1,32 long, 0,31 wide, massively built, containing three asymmetric parts. Basal part (truncus) with one distinct muscle and two subapical strongly sclerotised and slightly bent spines on ventrolateral edges. Middle part (glans) bearing some small subapical setae and one strong subbasal spine ventrally; four spines dorsally: two basal (left short, right long), one long subbasal (left) and one short apical (right). Distal part (stylus) as broad as glans, membraneous, without spines. Ductus ejaculatorius could not be traced exactly, but there are some darker lines on glans and stylus, which mark its course.

Female. Body 3,06 long, slightly more convex than in male, nearly egg-shaped. All details of body structure and coloration as in male. Chelicera weaker, without bump on second joint, palps and legs as in male. Ovipositor (Fig. 8) 1,56 long, 0,56 wide, with long furca, more strongly sclerotised and darker than basal ring. Two rows of short setae on basal ring and a group of longer ones on distal joints of furca. Seminal receptacles invisible. Dimensions: width of eye tubercle 1,12, palpal femur 0,91 long, femora of legs I—1,89, II—3,13, III—2,48, IV—3,53.

Material examined. SOUTH AFRICA: *Cape Province:* Diepwalle Forest Station, 22 km NE Knysna (33°57'S: 23°10'E), elev. 600 m, indigenous forest, on tree trunks, 10–13.i.1985, C. E. Griswold—5 ♂ (holotype—the biggest, darkest and best preserved specimen and paratypes), 1 subad. ♂; 11–13.xi. 1985, C. E. Griswold, J. Doyen & T. M. Griswold—1 ♂ (paratype), 1 juv. *Natal:* Karkloof Forest (29°26'S: 30°19'E), 25 km NNW Howick, Geekie's Farm (Benvie), indigenous forest, walking on forest floor, 5.i.1984, J. G. H. Londt, P. M. C. Croeser & C. E. Griswold—1 ♀ (allotype). All material is deposited in the Natal Museum, Pietermaritzburg (Type No. 405).

Caddella croeseri differs from other species of the genus as follows. Compared with *capensis*: male chelicera without hooked process on first joint, bump on second joint rounded, not anvil-like; main branch of forked spine of palpal femur either with blunt apex or additional subapical branch; penis with different number and location of spines and different shape of truncus and glans. Compared with *africana*: male chelicera with rounded bump on second joint; spines of palpal femur much longer than diameter of the joint; penis with different armature and without a loop-like structure on glans. Compared with *spatulipilis*: male chelicera with rounded bump; spines of palpal femur 4 (not 5) in number, longer than diameter of the joint; setae on palpus tactile (pointed), not glandular (spatulate).

The four known species of *Caddella* can be distinguished using the following key.

1 Pedipalp with glandular (spatulate) setae, its femur with 5 spines ventrally **spatulipilis** Lawrence
— Pedipalp with tactile (pointed) setae, its femur with 4 spines ventrally 2

2 Male chelicera without processes; spines of palpal femur shorter than its diameter .... **africana** (Lawrence)
— Male chelicera with process on second joint (or on both joints), spines of palpal femur longer than its diameter 3

3 Male chelicera with hooked process medially on first joint and anvil-like bump on second joint; forked spine of palpal femur with pointed apices, without additional branch .... **capensis** Hirst
— Male chelicera with rounded bump on second joint only; forked spine of palpal femur with blunt apex of its basal part or additional short subapical branch .... **croeseri** sp. n.

The new species has been named in honour of my colleague Peter M. C. Croeser (Natal Museum), one of the collectors of the first specimen.

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